Reviewer's report

Title: Incarceration is associated with used syringe lending among active injection drug users with detectable plasma HIV-1 RNA: A longitudinal analysis

Version: 1 Date: 21 July 2013

Reviewer: Anneli Uuskula

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Authors aim at assessing the relationships between incarceration and VL non-suppression and incarceration and used syringe lending during periods of viremia.

Throughout the text the use of term 'drug users' should be revised. The study analysed data on and the conclusions are applicable for ‘injection drug users’ not drug users in general.

Abstract

• Results section – please present 95% CI instead of p-values for AORs

Background:

• Please provide more appropriate references to the claim that „Among people who inject drugs (IDU), exposure to correctional facilities is common and has been consistently associated with heightened risk of sharing used syringes“. References provided [14,15] present data on sharing behaviour within the prisons, however the submitted work is focusing on sharing behaviour outside the prisons.

• Intuitively it is important to focus on syringes lending behaviour during viremia (and the data allows this level of detailed analysis). Do the authors have information on whether the lending behaviour changes in relation to viremic/non-viremic state? And at what cut-off for the viremia parenteral transmission is inhibited?

Methods

The section would benefit from more detailed information

• Where was the site of recruitment (harm reduction center? A special study center? Else?);

• What proportion of ACCESS participants are injection drug users? (Quoting: „Individuals are eligible for inclusion in ACCESS: … have used illicit drugs other than cannabinoids …“) (later in the methods authors specify that they excluded an individual’s follow-up period if they did not report any injection drug use [in that] period

• Please justify/reference using this cut-off value for detectable VL (>500 RNA copies/mL plasma)
• Was including the variable for the year of observation to the first model considered? (estimating the effect of incarceration on the likelihood of VL non-suppression)? ART has changed significantly from 1996 to 2012?
• Can CD4+ count be considered as a marker of eligibility for ART among those on ART? [quoting: „To account for HIV disease progression and clinical eligibility for ART, we included CD4+ cell count as an explanatory covariate in all multivariate models.”]

Results
The results section (and interpretability of the results) would benefit from more elaborate description not only the study source sample (the retention rate of IDUs in the ACCESS study) but also outcomes of interest – VL non-suppression (incl the proportion of study sample always VL supressed) and used syringe lending – currently the information provided is scant and scattered throughout the manuscript.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
'I declare that I have no competing interests’